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SILK-PRODUCING IN JAPAN.

It is an ill wind that blows nobody any good: India has profited by the troubles of America, and Japan has benefited by the failure of the silk-crops of Europe. Whether that benefit is to be temporary or permanent, remains to be seen. There is some fear that the short-sightedness which so often afflicts modern traders may prevent the silk-producers of Japan from making the most of a golden opportunity. This fear prompted the Yokohama Chamber of Commerce to call the attention of the silkmen of Japan to certain complaints made by their customers, and actuated also Mr Adams, Secretary to Her Majesty's Legation, to pay a visit, in company with three European silk inspectors, to the central silk districts of Shinshin, Mayebashi, Kôshin, and Hachôji, for the purpose of acquiring information as to the culture of the silkworm, and the prospects of the coming silk-season. It was a fortnight well spent; and the information so industriously gathered respecting the Japanese method of culture will be found interesting, even by those who only wear silk, and never set eyes on the raw material.

As the quality of the silkworms depends upon the quality of the food upon which they are reared, the proper cultivation of the mulberry tree is the first step towards success in silk-producing. The Japanese do not favour the growing of mulberry plants from seed, because trees so raised produce too much fruit and too little foliage, whereas they want plenty of large leaves and no fruit, the latter being valueless. They prefer, therefore, to raise their trees by suckers or layers. Where the first-named plan is adopted, an old tree is polled at a height of from five to eight inches from the ground, when, if properly treated, it will throw out fifty or sixty suckers, each of which, being detached in due time with its share of root, becomes a mulberry tree. As soon as the operation of polling has been performed, the earth is loosened about the roots of the tree, and all superabundant soil cleared away. Fifty or a hundred days are allowed to go by, according to the temperature of

the soil, then manure is applied, and loose earth relaid over the roots. Sometimes the trees, instead of being cut down to a few inches, are left from three to six feet high, the branches being carefully lopped from the middle and bottom of the trunks, while the upper ones are allowed to grow as vigorously as they please. 'This practice,' says Obi Kôtârô, a Japanese *employé* of the legation, 'should be limited to places where the soil is bad. Good soil, being thick and viscous, does not fly up before the wind. Hence, even if the trunk be short, the earth does not stick to the leaves. But bad soil is like sand, and has no viscous properties, so that it flies up before the wind, and bespatters the branches and leaves, which is a bad thing. For this reason, the tree is allowed to grow high, so that it may not be injured by the dirt.' As a rule, the mulberry trees are never allowed to attain their natural height, being kept down to a foot or a foot and a half, under the belief that the dwarfed tree, the tenderer and softer the leaf. Still full-grown trees may be seen near dwellings, and trees four or five feet high in the middle of fields.

Layering is considered the best of all methods of mulberry raising. By the beginning of the summer, all the branches, save two or three, have been cut from the trees, and at the end of June they throw out fresh buds. Then is the time for layering. The old branches are bent downwards, their middle portions well covered with earth, and their points turned upwards. When the buried branches have struck, and the roots are sufficiently strong, they are carefully cut away from the parent stock, and removed to a nursery-ground, where they are tended for twelve months before being transplanted finally to the fields in which they are intended to grow. The young plantations are well manured thrice a year—in the spring, before the trees bud; in the summer, after pruning; and again in the depth of winter. In Shinshin, where extra pains are taken, manure is applied in October as well as in January, April, and July; in all cases, the quantity of manure being regulated by the size of the trees, and the richness or poorness of the soil

in which they are planted. Decayed vegetable manure, night-soil, silkworm soil, and the lees of rapeseed after the expression of the oil, are used; but the most esteemed fertiliser is a mixture of daidzu beans, mashed up in saké lees—a mixture too expensive for the poorer class of cultivators, who substitute night-soil and rice-bran, which answers sufficiently well, if not so well as the costlier daidzu-saké.

After being permanently planted, the mulberry requires another year's growth before it is fit to be cut for worm-feeding, so that three years elapse from the time of layering before any profit returns to the raiser. The trees are generally planted along the borders of the fields, but sometimes set in rows across them, with sufficient space between the lines to allow of other crops being grown. At Uyeda, in Shinshin, large fields are devoted entirely to them; the trees, placed two feet from each other, standing on ridges at intervals of rather more than three feet. Several varieties are cultivated, the most common—all of which are known in Europe—being the Yotsume, the Nedgumigaishi, the Oha, and the Kikuha. The Yotsume differs from the other three in having narrow, irregular, deeply indented leaves, and in being the earliest leafer, affording leaves and buds for the worms during the first days after hatching. When a mulberry has done duty for forty or fifty years, it is taken up by the roots, and a young tree planted in its place.

The great bulk of silkworms are reared in the upper stories of the peasants' houses, but, if necessary, every nook and corner that can be possibly spared is given up to them. Those who can do things on a grander scale erect places for the purpose. These *manganeries*, as the French call them, are two-storied buildings of wooden frameworks, resting upon stone foundations, with walls of bamboo, coated inside and outside with mud, and roofed with thatch, tiles, or shingle. Three—sometimes the four—sides are provided with sliding shutters of wood, for use at night or in bad weather, a verandah being between them and the paper windows, through which light and air find their way at need.

The life of a silkworm, as a worm—that is, from its leaving the egg to forming the cocoon—lasts from forty to fifty days; during that time it has four periods of rest, known, nobody knows why, as the lion's, the falcon's, the boat's, and the garden rest, when, for the space of from four to seven days, the worm stops feeding, and casts its skin. Hatching-time varies according to the season, coming sometimes as early as the 20th of April, sometimes as late as the 5th of May. As soon as the temperature is favourable, and the early leaves of the mulberry appear, the egg-cards, which have been hanging in paper-bags from the ceiling, are taken out, and suspended in a shady spot in the open air. The eggs darken, and during the night the little black worms emerge from them. The first-comers are either thrown away or left unnoticed until their numbers are swelled sufficiently, when they are brushed or shaken off the cards into small paper-covered wooden boxes. Some breeders give them nothing to eat at this early stage; others chop up the buds of the Yotsume mulberry, and scatter them over the worms, after they have been sprinkled with sifted bran, to prevent them rolling themselves together in hard little balls. After a

day or two, the silkworms are removed to straw mats covered with a layer of rice-husks; and as they increase in size, and require more mats, the latter are placed upon small tables, standing on legs six inches high, which are placed one upon another, to save room. After the second or third rest, the worms are put into bamboo trays, and these stowed away upon wall-shelves, one above the other; care being taken to leave sufficient space between the top shelf and the roof to allow the noxious effluvia to ascend, without injuring the health of the worm, which it is likely to do, where such precaution is not observed.

Those who believe in the virtue of cleanliness are particular to take away all refuse food; this is generally done by removing the worms with chopsticks; but a much better plan is to place nets, stretched on small frames, over the worms, and cover them with fresh leaves, to which the silkworms quickly climb, rendering their transference to clean trays an easy matter. At first, the mulberry leaves are chopped up fine, and doled out often in small quantities; but as the worms increase in size the food increases in coarseness, until, at last, whole branches are strewn over the trays. When the creatures are dull and heavy, a little saké and water is sprinkled over their food to stimulate their appetites. This is unnecessary just before the last rest, for then they eat greedily, and if not well supplied, take their revenge by making light cocoons. After the garden rest they cease feeding, shed their skin, and four or five days after that, begin to form the cocoon. When this important time is at hand, the 'mabushi' is made by arching split bamboos lengthways over the trays, and spreading twigs of rape, pine, or rice straw over the arches, until a thick bed is formed. When a worm deserts its leaf to go wandering about the border of its tray, it is a sure sign it is ready to spin; those ready, but not rambling, are detected by the transparent paleness of their skin. All such are transferred by the fingers of young girls to the mabushi, which, as soon as spinning has fairly set in, is covered with a mat, and put upon a shelf, for eight or ten days, by which time the twigs will be so firmly connected by the web spun by the worms, that the whole bed may be taken from the tray, doubled up, and hung from the ceiling—to remain there until those concerned have leisure to remove the cocoons.

This happens in a week or so, when the cocoons are divided into those to be kept for eggs and those to be retained for reeling. The latter are again sorted into good, bad, and double cocoons, and exposed to the heat of the sun, or that of a charcoal brazier, to kill the chrysalis; the inferior cocoons being reeled off at once, while the better ones are dried carefully, and stored away in bags. The delicate operation of reeling is performed by young women. The apparatus consists of a portable stove, with a cast-iron basin; a pair of four-armed winders, about two feet in circumference, working upon one axle, and set in motion by a cog-wheel: under these is a horizontal shaft, with a slight motion from right to left, given by a cog-wheel working into that of the winder. A couple of bamboos, notched at the ends, are fixed on the shaft at right angles; and exactly under them, at a few inches from the basin's edge, are two hair rings. Within reach of the reeler's right hand, a single hand-turned winder is placed; this is used

to take off the 'noshi,' or outer covering of the cocoon. The basin is filled with pure water, not quite so hot as European reeler's use, and a number of cocoons thrown into it, which the reeler turns about with two willow sticks, until she has collected the threads of every cocoon upon their ends, when they are torn away, rolled into one thread between the fingers, and thrown upon the winder, which is turned slowly until the pure silk is reached. Cutting off the noshi thread, the girl ties the ends of pure silk to a hook on the edge of the basin, and detaching four, five, or more of them, according to the intended thickness of the silk, passes them through the hairs of the rings, and then through the corresponding bamboo rod notch, ties them on the winder, and sets it going. The friction and tension sustained by the threads passing over a smooth rod placed across the basin, and through the hair rings, makes them agglomerate. If any of the original threads break, fresh ones are thrown in just below the rod, and so drawn in among the others, causing, when not seized at their extremities, knots and irregularities on the surface of the silk. However, the danger of breakage is reduced to a minimum by the distance from the surface of the basin to the top of the winder not exceeding two feet, and the steam from the basin keeping the threads properly moistened. Before the silk can be taken to market, it has to be re-reeled into larger skeins. This is done by means of a long horizontal winder, about four and a quarter feet in circumference, the axle of which is supported by two perpendicular shafts, five feet from the ground. Half-way between the floor and the winder, a flat rectangular piece of wood is fixed parallel to the latter, having ten or twelve semi-circular wire rings attached to it at equal distances, and under each ring, endwise on the floor, stands a small winder. The silk threads are put through the rings, and tied to the winder, passing from the lower winders with a circular motion, modified by passage through the rings, so that each thread does not spread over more than four inches of the surface of the large winder—the silk, if necessary, being slightly wetted, to prevent its breaking. Although not such an elaborate operation as its European equivalent, the Japanese method of silk-winding answers its purpose; the faults in Japanese silk, which have brought down its high reputation, being rather the result of the carelessness of the workers than the inefficiency of the machinery employed.

Cocoons reserved for egg-producing are placed in single layers upon the old feeding-trays, covered with sheets of paper pierced with holes two or three inches apart. In about a fortnight's time the moths emerge from their prisons, generally at the dawn of day, but a little later if the weather is chilly. They quickly find their way through the holes in the paper, in search of light and air; the males fluttering their wings and flitting about, the females remaining quiet, with their heads hanging down. They at once set about coupling, and are left to their own devices for eight hours, when they are separated, the male thrown away, and the female removed to a card fixed in a wooden frame, to lay her eggs. Rearing desirous of insuring cards of good quality, only allow the moth to lay fifteen or twenty eggs, before removing her to another card on which to finish her work, as the earliest eggs are larger and stronger than those laid after-

wards. Indeed, the Japanese affirm, that given good moths and the above conditions, if there be ten thousand eggs on a card, at hatching-time all the worms will come out together. In order to fill the cards, a number of moths are placed on each, the number differing at the whim of the breeder or the caprice of his customers. In some districts, fifty moths are considered sufficient; but where the preference of foreign buyers for large cards is studied, as many as a hundred and thirty will be used. The cards filled, they are hung in paper-bags from the ceiling, where the wind can play upon them, until the yellow eggs assume the green or gray hue peculiar to the Japanese produce—and when they have become hard, they can be removed to any distance without injury. In the winter, the eggs are bleached by steeping the cards a night in cold water, carefully drying them, and replacing them in their old quarters. The object of this process is to kill all the weak eggs, so as to prevent them producing worms—the eggs of good quality passing unhurt through the ordeal. Only the poorer peasants trouble themselves about keeping eggs for stock-rearing, the majority of silkworm raisers obtaining their seed from Shinshin, which district, being mountainous and away from the sea, is supposed to be most favourably situated for the production of good silkworm seed.

A parasite called the uji makes sad havoc among Japanese silkworms: last year, in the most favoured district, the affected worms amounted to thirty and forty per cent., and in Kōshin the average was as high as eighty-four per cent. This mischievous creature is an annulated, footless, white maggot, that preys upon the chrysalis, which provides it at the same time with board and lodging. As soon as the uji has eaten all that is to be eaten, he breaks through the cocoon, leaving it useless for anything but floss-silk, if even for that, for in a few days it becomes quite hard and nearly black. The presence of this unwelcome intruder is detected at once upon opening a suspected cocoon; if one or more dark spots are found on the chrysalis, one or more uji will be found in its intestines; and if, upon examination, above a certain proportion of cocoons are found to be thus tenanted, the rearer gives up his hopes of eggs, and baking the cocoons in the oven, puts them by for reeling. The uji infects the very finest as well as the poorest of cocoons, its origin being a mystery to the Japanese: the most probable explanation of the matter is, that the maggot springs from the eggs of some fly, which being deposited upon the leaves of the mulberry, and so eaten by the worm, develop into uji after the worm attains its chrysalid state. No endemic or epidemic disease has yet appeared among the silkworms of Japan. They suffer from sudden atmospherical changes, are sometimes disinclined to spin, and now and then die off rapidly after the fourth casting of the skin; but all such ailments their breeders attribute to the weather, and are contented to grin and bear the results.

The value of the silk exported from Japan in the season of 1868-69 was L.2,252,666, besides two and a half million cards of silkworms' eggs. This amount is far in excess of that of any year since 1863, but that is owing to the advance in the price, not to an increase of the quantity produced—so far as that goes, Japan has been stationary. The merchants of Europe and America complain that the quality of the Japanese silk deteriorates

every year, that instead of each district making up its produce in its own way, so that the manufacturer could choose that which best answered his particular purpose, all kinds of silk are put up in the same way, while the reellers are careless, and mix bad and good colours together, and often send out the silk so badly reeled that it is mere waste; and this is going on while the Chinese are doing their best to improve their silk, so that the merchants may well ask the Japanese to consider whether they can be expected to buy bad silk in Japan when good is to be procured elsewhere. It is certain that if Japan is to hold its own, or obtain the position it is qualified to attain as a silk-supplying country, more care, energy, and honesty must be displayed by its silk-producers than is now the case. Signs of improvement are not wanting, the most notable one being the establishment of an inspection office at Mayebashi, where the merchants of the district have formed a sort of guild to buy up all the silk reeled in the district, and forward it to the office for inspection, previous to allowing it to go into the market. This is a step in the right direction; and if imitated by the other districts, may do much towards restoring confidence, and giving the silk-trade of Japan another chance of establishing itself among the great industries of the world.

A NEW TRANSATLANTIC GENIUS.

It would be hard, doubtless, to make the American nation believe it, but it is nevertheless the fact, that their refusal to accept an international copyright law has stifled the development of their own literature. Notwithstanding their cry for the protection of native industry, it is discovered that United States' publishers will not give money for American books when they can get English ones for nothing, and therefore it is that one can count the number of living transatlantic authors on one's ten fingers. Even such native literary talent as does exhibit itself, is almost always tinged with politics, without which, it seems, it would be unable to obtain a hearing. Notwithstanding his advantages of novel scenery, new conditions of life, and a great mixture of races from which to paint, the American novelist is beaten out of the field by the British author. But every now and then, a man (or woman) arises in the United States, the flame of whose genius is not to be hidden by that bushel of wrong, American piracy; and who, out of the new material that lies ready to his hand, shapes out a striking story or poem. Even then, as in *Uncle Tom's Cabin* and the *Biglow Papers*, the *sauce piquante* of politics is necessary, in order to recommend the viand, however dainty in itself; and so it is with the latest American genius, Mr Bret Harte (as he chooses to call himself) of San Francisco.

His *Luck of Roaring Camp*—one of the best short stories, in our judgment, that was ever written—would not have made him a reputation, had it not been supplemented by his satire upon the outcry against 'cheap labour' in his *Heathen Chinee*. That the necessity for political allusion was pressed upon him, seems evident, since his genius is anything but adapted for it; large questions slip through his fingers; but what he can grasp, he

treats like a master of his art. There is an air of ignorance about him, with respect to the received opinions of philosophy and religion, which although of course affected, and used for purposes of satire, fits him to a nicety, and it is a pity that he should ever throw it off. What he undertakes to describe—namely, life among the miners in California—he describes to the letter, without glow or gush, but with great humour and exquisite pathos. It is true there are some respectable persons who may think such poor roughs not worth hearing about, but that would certainly not have been Shakespeare's opinion, had he enjoyed Mr Bret Harte's opportunities; nor is it ours. He acknowledges the faults of his 'sitters,' but respectfully suggests to us that they really are God's creatures after all, and with something even of the divine element within them; 'which the same he will rise to explain.'

The *Luck of Roaring Camp* opens with the death in childbirth of the only woman in that wild society, Cherokee Sal. 'Dissolute, abandoned, and irreclaimable, she was yet suffering a martyrdom hard enough to bear even when veiled by sympathising womanhood, but now terrible in her loneliness. The primal curse had come to her in that original isolation which must have made the punishment of the first transgression so dreadful. It was, perhaps, part of the expiation of her sin, that, at a moment when she most lacked her sex's intuitive tenderness and care, she met only the half-contemptuous faces of her masculine associates. Yet a few of the spectators were, I think, touched by her sufferings. Sandy Tipton thought it was "rough on Sal," and, in the contemplation of her condition, for a moment rose superior to the fact that he had an ace and two bowers in his sleeve.' A bower, we may here explain, is a knave, and these cards were in Mr Tipton's sleeve 'with intent to deceive'; a 'gambler' in California not being, as in England, merely a gentleman who plays for more than he can afford, but a professional cheat. One must not, however, judge men by their profession only, and still less by their physical appearance.

The assemblage numbered about a hundred men. One or two of these were actual fugitives from justice, some were criminal, and all were reckless. Physically, they exhibited no indication of their past lives and character. The greatest scamp had a Raphael face, with a profusion of blonde hair; Oakhurst, a gambler, had the melancholy air and intellectual abstraction of a Hamlet; the coolest and most courageous man was scarcely over five feet in height, with a soft voice and an embarrassed, timid manner. The term "roughs" applied to them was a distinction rather than a definition. Perhaps in the minor details of fingers, toes, ears, &c., the camp may have been deficient; but these slight omissions did not detract from their aggregate force. The strongest man had but three fingers on his right hand; the best shot had but one eye. This rough lot outside the cabin where the woman lay, though interested in her condition, were not so much the victims of sentiment but that bets were freely offered upon the result of what they were awaiting. 'Three to five that "Sal" would get through with it;' even that the child would survive; side bets as to the sex and complexion of the coming stranger. In the midst of an excited discussion, an exclamation

came from those nearest the door, and the camp stopped to listen. Above the swaying and moaning of the pines, the swift rush of the river, and the crackling of the fire, rose a sharp, querulous cry—a cry unlike anything heard before in the camp. The pines stopped moaning, the river ceased to rush, and the fire to crackle. It seemed as if Nature had stopped to listen too. The camp rose to its feet as one man! It was proposed to explode a barrel of gunpowder, but, in consideration of the situation of the mother, better counsels prevailed, and only a few revolvers were discharged; for, whether owing to the rude surgery of the camp, or some other reason, Cherokee Sal was sinking fast. Within an hour she had climbed, as it were, that rugged road that led to the stars, and so passed out of Roaring Camp, its sin and shame, for ever. But the child was alive, and what was to be done with it? The extempore surgeon and midwife, who had been appointed by acclamation to that post on the ground that he was the putative father of two families (on account of which illegal fact, indeed, that city of refuge, Roaring Camp, was indebted to his company), suggests a general subscription: he opens the cabin door, and exhibits in a candle-box upon the table the new-born babe, swathed in staring red flannel; beside it, is his hat, whose use is thus eloquently indicated: "Gentlemen will please pass in at the front door, round the table, and out at the back door. Them as wishes to contribute anything toward the orphan will find a hat handy." The first man entered with his hat on; he uncovered, however [out of respect to the *Dread Presence of Death*] as he looked about him, and so, unconsciously, set an example to the next. In such communities, good and bad actions are catching. As the procession filed in, comments were audible—criticisms addressed, perhaps, rather to Stumpy, in the character of showman—"Is that him?" "Mighty small specimen;" "Hasn't mor'n got the colour;" "Ain't bigger nor a durringer." The contributions were as characteristic: A silver tobacco-box; a doubloon; a navy revolver, silver mounted; a gold specimen; a very beautifully embroidered lady's handkerchief (from Oakhurst the gambler); a diamond breastpin; a diamond ring (suggested by the pin, with the remark from the giver that he "saw that pin and went two diamonds better"); a slung shot; a Bible (contributor not detected); a golden spur; a silver teaspoon (the initials, I regret to say, were not the giver's); a pair of surgeon's shears; a lancet; a Bank of England note for five pounds; and about two hundred dollars in loose gold and silver coin. During these proceedings, Stumpy maintained a silence as impassive as the dead on his left, a gravity as inscrutable as that of the newly born on his right. Only one incident occurred to break the monotony of the curious procession. As Kentuck bent over the candle-box half curiously, the child turned, and, in a spasm of pain, caught at his groping finger, and held it fast for a moment. Kentuck looked foolish and embarrassed. Something like a blush tried to assert itself in his weather-beaten cheek. "The — little cuss!" he said, as he extricated his finger, with, perhaps, more tenderness and care than he might have been deemed capable of shewing. He held that finger a little apart from its fellows as he went out, and examined it curiously. The examination provoked

the same original remark in regard to the child. In fact, he seemed to enjoy repeating it. "He rastled with my finger," he remarked to Tipton, holding up the member, "the — little cuss!"

A resolution to adopt the child was carried in camp unanimously; but unhappily there was only one female now left in the locality, and she was an ass. It was necessary, therefore, to intrust the child's nourishment to her. As for its other necessities, they were sent for at once, 'eighty miles by mule,' to Sacramento. 'The best that can be got,' said the treasurer of the fund, pressing a bag of gold-dust into the express-man's hand; 'lace, you know, and filigree-work, and frills. Cuss the expense.' And everything was got of the most gorgeous kind, and at a price that would have been shrunk from in Buckingham Palace. And in that rare atmosphere of the Sierra Hills, and on the ass's milk, the little orphan thrived, and Kentuck adopted him as his own. 'Me and that ass,' he would say, addressing the helpless bundle before him, 'has been father and mother to you. Don't you never go back on us.' He was christened 'Luck,' and his birth seemed to have brought his namesake to the Camp, for it prospered. His dwelling was kept clean and white-washed, and so handsomely set forth with his rosewood cradle, that 'it sorter killed the rest of the furniture.' The cabin, therefore, was rehabilitated splendidly, so that in self-defence the rival establishment of Tuttle's grocery bestirred itself, and imported a carpet and mirrors; and the reflections of the latter on the appearance of Roaring Camp tended to produce stricter habits of personal cleanliness. The baby, in fact, worked a reformation, not only skin-deep, but in morals. Within the sacred precincts of his little cabin, profanity was tacitly given up, and even elsewhere the popular phrases of 'D— the luck' and 'Curse the luck,' were abandoned as having a new personal bearing. 'On the long summer days, The Luck was usually carried to the gulch, from whence the golden store of Roaring Camp was taken. There, on a blanket spread over pine-boughs, he would lie while the men were working in the ditches below. Latterly, there was a rude attempt to decorate this bower with flowers and sweet-smelling shrubs, and generally some one would bring him a cluster of wild honeysuckles, azaleas, or the painted blossoms of *Las Mariposas*. The men had suddenly awakened to the fact, that there were beauty and significance in these trifles, which they had so long trodden carelessly beneath their feet. A flake of glittering mica, a fragment of variegated quartz, a bright pebble from the bed of the creek, became beautiful to eyes thus cleared and strengthened, and were invariably put aside for "The Luck." It was wonderful how many treasures the woods and hill-sides yielded that "would do for Tommy." Surrounded by playthings such as never child out of fairy-land had before, it is to be hoped that Tommy was content. He appeared to be serenely happy, albeit there was an infantine gravity about him, a contemplative light in his round gray eyes, that sometimes worried Stumpy. He was always tractable and quiet, and it is recorded that once, having crept beyond his "corral"—a hedge of tessellated pine-boughs, which surrounded his bed—he dropped over the bank on his head in the soft earth, and remained with his mottled legs in the air in that position for at least

five minutes with unflinching gravity. He was extricated without a murmur. I hesitate to record the many other instances of his sagacity, which rest, unfortunately, upon the statements of prejudiced friends. Some of them were not without a tinge of superstition. "I crept up the bank just now," said Kentuck one day, in a breathless state of excitement, "and dern my skin if he wasn't a-talking to a jay-bird as was a-sittin' on his lap! There they was, just as free and sociable as anything you please, a-jawin' at each other just like two cherry-bums."

These were 'flush times' with the Camp, and it was greatly envied by strangers. The express-man, its only link with the outer world, relates that 'in Roaring they've got vines and flowers round their houses, and wash themselves twice a day; but they're mighty rough on strangers, and worship an Ingin baby.' At last the good-fortune ended; the snow on the Sierra melted suddenly; the North Fork leaped over its banks one night, and swept the valley of Roaring Camp from end to end. When the morning broke, the sacred cabin was gone. Far down the river, Kentuck was found with the Luck of Roaring Camp in his arms. They saw that the child was cold and pulseless. 'He is dead,' said one. Kentuck opened his eyes. 'Dead!' he repeated feebly. 'Yes, my man, and you are dying too.' A smile lit up the eyes of the expiring Kentuck. 'Dying,' he repeated; 'he's a taking me with him. Tell the boys I've got "The Luck" with me now.'

It is impossible not to see, in the humour and pathos of this powerful sketch, a strong family resemblance to those smaller tales of Dickens, such as *The Boots at the Holly Tree*, which he himself estimated, and deservedly, as highly as his more ambitious productions. Mr Bret Harte would probably be the first to own it, for he—out in the wilds with nature—has expressed with tender gratitude how much he owes, in common with his rough but whole-hearted companions, to the great master of fiction. If the puny litterateurs who have here endeavoured to detract from the fair fame, and dishonour the very grave of their great fellow-countryman, should stray so far from Cockaigne as to Roaring Camp, it would be advisable for them to 'shut up' with respect to the merits of Charles Dickens; for there they hold him very dear. One of the most charming of Mr Bret Harte's poems describes 'a reading' in the camp, of *Little Nell*:

The roaring camp-fire, with rude humour, painted
The ruddy tints of health
On haggard face and form that drooped and fainted
In the fierce race for wealth;
Till one arose, and from his pack's scant treasure
A hoarded volume drew,
And cards were dropped from hands of listless leisure
To hear the tale anew;
And then, while round them shadows gathered
Faster,
And as the fire-light fell,
He read aloud the book wherein the Master
Had writ of 'Little Nell.'
The fir-trees, gathering closer in the shadows,
Listened in every spray,
While the whole camp, with 'Nell' on English
meadows
Wandered and lost their way.

And so in mountain solitudes—o'ertaken

As by some spell divine—
Their cares dropped from them like the needles
shaken

From out the gusty pine.

Lost is that camp, and wasted all its fire;

And he who wrought that spell!—

Ah, towering pine and stately Kentish spire,
Ye have one tale to tell!

Lost is that camp! but let its fragrant story

Blend with the breath that thrills

With hop-vines' incense all the pensive glory
That fills the Kentish hills.

And on that grave where English oak, and holly,

And laurel wreaths entwine,

Deem it not all a too presumptuous folly—

This spray of Western pine!

July 1870.

How overpowering is testimony such as this, from such a writer, as compared with the shallow and flippant criticism which would deny to Dickens the truth of nature! But if Mr Harte owes his Master something, he has much that is his own. *The Outcasts of Poker Flat* is quite as powerful as the story we have quoted, and is even more characteristic of the author: nor is one of the fifteen short stories and sketches of which his little prose volume is composed (although it must be owned they are very unequal), without some touch of genius. His peculiar mission seems to be to exhibit, in disrespectful, not to say apparently wholly depraved persons, some seeds of good; not obtrusively, nor 'with a purpose,' but shewing themselves in the natural course of events, and as the circumstances arise to develop them. Of course, he would therefore not be the man to give in to sweeping assertions about 'inferiority of race,' even if he had no personal experience of the matter; as it happens, however, he has had a great deal of it; and among other 'lots' of humanity which have been submitted to his notice, is *John Chinaman*. Of him he says: 'I have gathered enough to justify me in believing him to be generally honest, faithful, simple, and painstaking. Of his simplicity let me record an instance, where a sad and civil young Chinaman brought me certain shirts with most of the buttons missing, and others hanging on delusively by a single thread. In a moment of unguarded irony, I informed him that unity would at least have been preserved if the buttons were removed altogether. He smiled sadly, and went away. I thought I had hurt his feelings, until the next week, when he brought me my shirts with a look of intelligence, and the buttons carefully and totally erased.' At another time, to guard against his general disposition to carry off anything as soiled clothes that he thought could hold water, I requested him to always wait until he saw me. Coming home late one evening, I found the household in great consternation over an immovable Celestial who had remained seated on the front door-step during the day, sad and submissive, firm, but also patient, and only betraying any animation or token of his mission when he saw me coming. This same Chinaman evinced some evidences of regard for a little girl in the family, who in her turn reposed such faith in his intellectual qualities as to present him with a preternaturally uninteresting Sunday-school book, her own property. This book John made a point of carrying ostentatiously

with him in his weekly visits. It appeared usually on the top of the clean clothes, and was sometimes painfully clasped outside of the big bundle of soiled linen. Whether John believed he unconsciously imbibed some spiritual life through its pasteboard cover, as the Prince in the *Arabian Nights* imbibed the medicine through the handle of the mallet, or whether he wished to exhibit a due sense of gratitude, or whether he hadn't any pockets, I have never been able to ascertain. In his turn he would sometimes cut marvellous imitation roses from carrots for his little friend. I am inclined to think that the few roses strewn in John's path were such scentless imitations. The thorns only were real. From the persecutions of the young and old of a certain class, his life was a torment. I don't know what was the exact philosophy that Confucius taught, but it is to be hoped that poor John in his persecution is still able to detect the conscious hate and fear with which inferiority always regards the possibility of even-handed justice, and which is the key-note to the vulgar clamour about servile and degraded races.'

Both stories and sketches in Mr Harte's volume are excellent in their way; but, as a rule, the shorter they are the better they are. He is evidently not quite at home at weaving a plot, or driving his own creations three or four in hand; but for describing a single incident, and for bold and graphic outlines of character, we have not seen his equal for many a day.

So much for Mr Bret Harte's prose: let us now introduce our readers to what is evidently considered, in his own country at least, a much greater treat, his humorous poetry. The poem which gives its name to the collection, and which has mainly won for him his fame, is *That Heathen Chinese*. This is a ballad purporting to be written by one Truthful James, and describes how he, in company with a confederate, Bill Nye, sit down to play cards with Ah Sin, a Chinaman, with intent to cheat the same, and what came of it.

It was August the third;
And quite soft was the skies;
Which it might be inferred
That Ah Sin was likewise;
Yet he played it that day upon William
And me in a way I despise.

Which we had a small game,
And Ah Sin took a hand:
It was Euchre. The same
He did not understand;
But he smiled as he sat by the table,
With the smile that was child-like and bland.

Yet the cards they were stocked
In a way that I grieve,
And my feelings were shocked
At the state of Nye's sleeve:
Which was stuffed full of aces and bowers,
And the same with intent to deceive.

But the hands that were played
By that heathen Chinese,
And the points that he made
Were quite frightful to see—
Till at last he put down a right bower,
Which the same Nye had dealt unto me.

Then I looked up at Nye,
And he gazed upon me;
And he rose with a sigh,
And said: 'Can this be?

We are ruined by Chinese cheap labour'—
And he went for that heathen Chinese.

In the scene that ensued
I did not take a hand,
But the floor it was strewned
Like the leaves on the strand
With the cards that Ah Sin had been hiding,
In the game 'he did not understand.'

In his sleeves, which were long,
He had twenty-four packs—
Which was coming it strong,
Yet I state but the facts;
And we found on his nails, which were taper,
What is frequent in tapers—that's wax.

Which is why I remark,
And my language is plain,
That for ways that are dark,
And for tricks that are vain,
The heathen Chinese is peculiar—
Which the same I am free to maintain.

The point of the satire lies, of course, in the virtuous indignation of the Yankee cheat, when he finds himself defeated at his own game, and breaks forth against 'Chinese cheap labour;' but so dull and prejudiced is the political party that opposes itself to the immigration of the Celestials, that a leading member of it is said to have taken the poem *au sérieux*, and to have written to Mr Bret Harte to thank him for such a contribution to the good cause.

Truthful James is, it seems, a member of the Geological Association in his district, and, 'not being up to small deceit, nor any sinful games,' proposes to tell, in simple language,

All about the row
That broke up our society upon the Stanislaw.

Having first premised that

It is not a proper plan
For any scientific gent to whale his fellow-man,

he thus proceeds with his narration:

Now nothing could be finer or more beautiful to see
Than the first six months' proceedings of that same
society,
Till Brown of Calaveras brought a lot of fossil bones
That he found within a tunnel near the tenement of
Jones.

Then Brown he read a paper, and he reconstructed
there,
From those same bones, an animal that was extremely
rare;
And Jones then asked the Chair for a suspension of
the rules,
Till he could prove that those same bones was one of
his lost mules.

Then Brown he smiled a bitter smile, and said he was
at fault.
It seemed he had been trespassing on Jones's family
vault:
He was a most sarcastic man, this quiet Mr Brown,
And on several occasions he had cleaned out the town.

Now I hold it is not decent for a scientific gent
To say another is an ass—at least, to all intent;
Nor should the individual who happens to be meant
Reply by heaving rocks at him to any great extent.

Then Abner Dean of Angel's raised a point of order—
when
A chunk of old red sandstone took him in the
abdomen,
And he smiled a kind of sickly smile, and curled up
on the floor,
And the subsequent proceedings interested him no
more.

That there are humour and freshness in these
poems, is undeniable; but, to our mind, Mr Bret
Harte is at his best when he is photographing some
typical digger, or enclosing in his clear amber
some characteristic feat or adventure. His poem
on the mare *Chiquita* might, for truth and vigour,
be compared with Browning's portrait of Red
Berild, and Landseer himself have painted her
from it, as if from life.

Beautiful! Sir, you may say so. Thar isn't her
match in the county.
Is thar, old gal—Chiquita, my darling, my beauty?
Feel of that neck, sir—thar's velvet! Whoa! Steady
—ah, will you, you vixen!
Whoa! I say. Jack, trot her out; let the gentleman
look at her paces.

Morgan!—She ain't nothin' else, and I've got the
papers to prove it.
Sired by Chippewa Chief, and twelve hundred dollars
won't buy her.
Briggs of Tuolumne owned her. Did you know Briggs
of Tuolumne?—
Busted hisself in White Pine, and blew out his brains
down in 'Frisco?

Hedn't no savey—hed Briggs. Thar, Jack! that'll
do—quit that foolin'!
Nothin' to what she kin do, when she's got her work
cut out before her.
Hosses is hosses, you know, and likewise, too, jockeys
is jockeys;
And 'tain't ev'ry man as can ride as knows what a
hoss has got in him.

Know the old ford on the Fork, that nearly got Flani-
gan's leaders?
Nasty in daylight, you bet, and a mighty rough ford
in low water!
Well, it ain't six weeks ago that me and the Jedge
and his nevey
Struck for that ford in the night, in the rain, and the
water all round us;

Up to our flanks in the gulch, and Rattlesnake Creek
just a-bilin',
Not a plank left in the dam, and nary a bridge on the
river.
I had the gray, and the Jedge had his roan, and his
nevey, Chiquita;
And after us trundled the rocks just loosed from the
top of the cañon.

Lickity, lickity, switch, we came to the ford, and
Chiquita
Buckled right down to her work, and afore I could
yell to her rider,
Took water jest at the ford, and there was the Jedge
and me standing,
And twelve hundred dollars of hoss-flesh afloat, and a
driftin' to thunder!

Would ye b'lieve it? that night that hoss, that ar'
filly, Chiquita,
Walked herself into her stall, and stood there, all
quiet and dripping:
Clean as a beaver or rat, with nary a buckle of harness,
Just as she swam the Fork—that hoss, that ar' filly,
Chiquita.

That's what I call a hoss! and—What did you say?—
O, the nevey?
Drownded, I reckon—leastways, he never kem back
to deny it.
Ye see the derved fool had no seat—ye couldn't have
made him a rider;
And then, ye know, boys will be boys, and hosses—
well, hosses is hosses!

The poems are not all 'humorous,' though a
characteristic dread of the suspicion of any morbid
sentiment has, perhaps, caused our author to
include all under that title. There is one called
Jim, full of tenderness after its strange 'Frisco'
fashion; and here is another, styled *In the Tunnel*:

Didn't know Flynn—
Flynn of Virginia—
Long as he's been 'yar?
Look 'ee here, stranger,
Whar hev you been?

Here in this tunnel
He was my pardner,
That same Tom Flynn—
Working together,
In wind and weather,
Day out and in.

Didn't know Flynn!
Well, that is queer;
Why, it's a sin
To think of Tom Flynn,
Tom with his cheer,
Tom without fear—
Stranger, look 'yar!

Thar in the drift,
Back to the wall,
He held the timbers
Ready to fall;
Then in the darkness
I heard him call:
'Run for your life, Jake!
Run, for your wife's sake!
Don't wait for me.'

And that was all
Heard in the din,
Heard of Tom Flynn—
Flynn of Virginia.

That's all about
Flynn of Virginia.
That lets me out.
Here in the damp—
Out of the sun—
That 'ar derved lamp
Makes my eyes run.
Well, there—I'm done!

But, sir, when you'll
Hear the next fool
Asking of Flynn—
Flynn of Virginia—
Just you chip in,
Say you knew Flynn;
Say that you've been 'yar.

Surely there is a touching simplicity in those short
lines, that Wordsworth would have welcomed,
notwithstanding their wild lingo, and an heroic
incident worthy of any poet, though the hero was
but a navvy, and the scene a tunnel! Similarly,
throughout both prose and verse of Mr Bret Harte,
we may find sermons, if not in stones, in those

whose hearts we are accustomed to consider little less hard, and good not only in everything, but in those whom we, in our ignorant complacency, are too apt to think wholly evil.

NOT WOODED, BUT WON.

CHAPTER XL.—THE ESCAPE.

WHAT had happened, or rather what had not happened, all these days, or months, or years? Why was the room so dark, while all without seemed day? Why did Vance sit in the chair by the fire yonder, looking at her so pitifully, and never speaking a word? These questions of poor Mabel, wild and pointless as they were, were lucid compared with the thoughts that filled her brain as she lay in her bed through long sunless days and sleepless nights, hovering between life and death.

Her most frequent dream, and it was a quiet and peaceful one, was, that she was a child once more, in the dear old home, too ill to recognise Martha and her father, who came and went as usual, nevertheless, and ministered to her tenderly. Ju. had been sent away from home, probably because her own malady was contagious, and the only plaything which she was allowed was a beautiful pink doll. This lay in the bed with her, and opened and shut its eyes, and even cried. It was always snug and warm, and yet it did not melt. If she were to die—and she knew she was very ill, and likely to do so—she would beg of Ju., with her last breath, if she could only see her—but she was somehow far away—to clothe and keep this doll when she was gone! The idea of death had no terrors for her except upon this account, lest the doll should suffer; but she was in extreme fear of a certain drunken tramp, whom Martha and she had met on the road one day, and who had threatened to be revenged on them for not giving him money: he had a begging petition in his hand, done up in a square packet, and at his heels slouched a bow-legged dog. She was above all things solicitous that the man and dog should never get her doll. She was almost always in pain, and very weak, but what troubled her most was, that whatever she said no one seemed to mind; all her questions remained unanswered. At last, she caught Carry's eye, one day, or night (she scarce knew which), and said: 'Do speak to me, Carry. No one speaks to me.'

But there was no answer.

'Why are you dressed in black?' asked she appealingly.

At this, Carry burst into tears, and the doll stirred beside her, and clasped her with its tiny fingers, and gave a pitiful cry too. Then somehow she knew that this was her own child, and her heart leaped for joy.

'I have been very ill, Carry, have I not?'

'O yes, ma'am—at death's door,' sobbed Carry; 'but you are better now, much better. You will soon be well and strong, but you must keep quite quiet.'

'Where is my husband?' inquired Mabel.

'Hush, hush! You mustn't talk: the doctor said that the least excitement was to be avoided.'

'Yes, I remember,' said Mabel thoughtfully.

'He was to have nothing to trouble him, and he had so much, I know! What was it?'

'I don't know, ma'am, indeed,' said Carry earnestly. 'Nobody knows.'

'You know something, Carry; tell me what you know: I had rather hear it from your lips than from another's.'

There was a long pause, during which Vance approached the bed, and stooping down, kissed first her mistress and then the child. 'It is an orphan, madam,' whispered she tenderly, and pointed to her black dress.

More days and nights of weakness and of pain, or was it but a few hours or minutes? Her eyes were sore with weeping, but the tears had cleared her brain when she woke next, to find faithful Carry still leaning over her pillow.

'Was it long ago, Carry?' asked she.

'Since master died? Three weeks to-day, madam.'

'Tell me all.'

'I know nothing, save that he is dead; that is all that anybody knows. It was very sudden. The doctor said it was his heart: a very little would have done it; and Mr Horn'—

Mabel clasped her child tight to her breast, and such a look of terror came into her face that Carry stopped in alarm.

'Is he here—at Wapshot?' whispered her mistress.

'No, madam. He left immediately after the funeral.'

'But he is coming back again. I know he is.'

'Not at present, madam, let us hope. Nobody wants Mr Horn here. If God would only take him, and make your bonny boy the heir, that would please everybody!'

'Do you really mean that? Would you take my darling's part against him? I mean, will you help me to save its life?'

'O dear, dear; pray, don't go on like that, madam,' cried Carry, wringing her hands. 'I have done you harm, I see; and Mrs Merthyr and the doctor warned me to tell you nothing. Pray, calm yourself.'

'I am quite calm and sane, Carry; do not fear for me, but only for this little one. If you love him or me, I beseech you, help us now. If you have ever had cause to fear or hate this man, believe me that we too have cause to fear and hate him: he is a murderer in his heart already. I am quite friendless here, Carry; my little babe and I have none to look to but yourself; oh! will you help us?'

'Indeed, indeed, I will, dear mistress. What shall I do?'

'Get me my clothes—the dress I wore that dreadful night. Quick, quick!'

'But, madam, even if you were fit to put it on, which you are not—the dress is not a black one, you forget.'

Nevertheless, Carry brought it from the wardrobe, and watched with wonder her mistress smooth the garment out upon the counterpane. As she did so, in tones that by comparison with the feverish anxiety she had just evinced were quiet and composed—'Have I been, mad as well as ill?' inquired Mabel.

'You have not been yourself, and that's the truth, madam,' said Carry apologetically. 'You called the doctor, father, and Mrs Merthyr, Martha; and your talk has been on tramps, and dogs, and dolls.'

'Never on shipwrecks, or savage lands, Carry? Are you quite sure?'

'Never whilst I was with you, madam, and I have been with you most days and nights. Has your mind been running on such things, that you think you talked of them?'

'Yes,' said Mabel thoughtfully. 'If her maid spoke truth, she had not been raving, then, about the secret; that was so far well. A sudden thought caused her to ask Carry to fetch something from the escritoire in the next room.'

'It is not there, madam,' was the reply. 'It got knocked down and broken, I don't know how; and Mrs Merthyr, finding it was empty, sent it to be repaired.'

'Knocked down and broken!' True, she had seen her husband fall; and for all she knew, when sense went from her at that ghastly sight, she might herself have fallen, and thrown down the desk. But was it not more likely that Horn himself, raging to find some clue to her knowledge of that with which she had so audaciously charged him, had pulled the escritoire to pieces! How thankful she felt now that she had removed the packet to that safe spot where, but a moment since, she had felt it smooth and safe! Of the authenticity of its contents she felt as positively certain as of her own existence, though the proof was as far off as ever—nay, even farther. For who, her husband being dead, would have the power to prosecute the necessary researches? She had no scruples as to doing so now; not only because he was no more, but for another reason. It seemed to her, in that lightning flash of vision when she had seen Mr Winthrop totter towards her, that on his livid face there was a look of trust and faith, and that his outstretched hands had appealed to her for aid against this brutal wretch, who had boasted of his own duplicity, and striven to blacken her fair fame within his hearing. 'If he had but lived,' she thought, 'he would have seen justice done to me and mine.' But now, if justice was to come, it must be by other means. True, she could see none. This written confession was all she had of proof; insufficient, she was well aware, to obtain credence from the most willing mind, though so convincing to herself. But one man in the world would credit it, and he the one whose interest lay in its destruction, and who had sworn to compass hers. He knew not what it was that she was possessed of, but it was more than probable that he suspected what it was. None but the devil, said he, could have told her—that is, by word of mouth; he must needs conclude, then, that the secret was in writing. Yet, here she was beneath this man's own roof, helpless, and weak, and ill, a slender guard on a great treasure, set in a perilous place; above all, there was her child in peril too!

'Carry,' said Mabel firmly, 'at what times does Mrs Merthyr come to see me?'

'She comes three times a day, madam, after each of her meals, remaining here an hour at mid-day, when I have my dinner; but in case there should be any change in you, especially if you should come to yourself, as you have done—Heaven be thanked!—she charged me I was to be sure and let her know. I ought to have summoned her at once, but—'

'Hush, listen!' interrupted Mabel decisively. 'I am your mistress now, and you will obey me. When Mrs Merthyr comes, I shall be asleep, and you must let her believe matters have remained

just as they were in the meantime. Promise me this.'

'Of course, madam, I shall obey you rather than Mrs Merthyr.'

'Good. At what times does the doctor come?'

'In the morning at ten o'clock, and about the same hour at night.'

'Then, by eleven or so, the house is quite quiet, I suppose?'

'O yes, madam; there is nothing to keep any one up now—no junketings in the servants' hall, nor such like, as you may well believe. To be sure, there's Murk, Mr Horn's man, who seemingly cares nothing for what has happened, and drinks and runs on as usual.'

'Murk here?' cried Mabel with a shiver. 'Then things are even worse for us than I feared they were. If you have any love for me, or pity for my little babe, Carry,' pleaded she with vehemence, 'I once again entreat you to help us!'

'If I can, I will, madam,' answered the girl simply.

'And yet,' said Mabel, 'I must tell you frankly that in helping me you will make Mr Horn your enemy.'

'Mr Horn has made me his enemy for life!' answered the girl with vehemence. 'His worst can be no worse than the ill he has already done us. When I said: "Please God to take him," you may be sure that was not what I meant at all.'

At any other time, Mabel would have reproved her attendant for entertaining such uncharitable ideas; but the occasion was scarcely one for a homily.

'Have you any friend in the village that you can thoroughly depend upon, Carry?'

'I—I think I have, madam,' replied the girl with a blush and a stammer that told their own tale. 'There's Philip Dod, the miller's son, as would do, I believe, anything I asked him to do.'

'And yet keep his own counsel?' continued Mabel thoughtfully.

'O yes, madam, naively replied Carry. 'Philip is not one to kiss and tell, nor is he one of those that goes to the *Dragon*, like Mr Murk, to boast and bawl o' nights. His head is as good a one, it is said, as any in Wapshot; and as for his heart, if it be not leal and true, there's no such a thing in man. You may trust Philip, madam, believe me.'

'Carry,' said Mabel suddenly, 'if I thought that a true heart such as you describe was to be bribed, I would say here is fifty pounds for one hour's work, and my promise (if I ever have the means) to give his bride a dower. But what I am about to ask you for pity's sake, do you ask him for love's.'

—What time is it now?'

'Near mid-day, madam.'

'Then, when Mrs Merthyr has taken your place here, you must find some excuse for going down to the village and seeing Philip.'

'I'll endeavour to think of one, madam,' replied Carry demurely, and as though such an idea had never entered into her head before.

'When you have found him, you must first bind him to secrecy, and then persuade him to have a post-chaise in waiting, at eleven to-night, at the cross roads by Fellfoot. Here is a five-pound note, in case he may not have the money by him to hire it'—

'But, madam,' interrupted the girl aghast, 'you

are not fit to move. The cold will kill you, and your poor baby too.'

'I would rather trust him to the bitterest east wind that ever blew on the white fella,' said Mabel vehemently, 'than to the mercy of Horn Winthrop. Another night beneath this roof would kill me of itself. In every sound I hear his footfall.—Hush! what is that?'

Dumb and stiff, Mabel sat up and listened, with damp brow and stony stare. Her look of terror had more persuasion for tender-hearted Carry than all her arguments had had. 'All shall be as you desire,' she whispered soothingly. 'Lie down again, dear madam; it is only Mrs Merthyr.'

As Mabel closed her eyes, the stealthy opening of the door, and rustle of stiff silk by her bedside, announced the presence of the housekeeper.

'How does your mistress seem, Vance? Has there been any change since the morning?'

'She seems more inclined for sleep, I think, ma'am,' replied the waiting-maid, not without some trepidation, for her early awe of the stately housekeeper had by no means worn away with years. 'But it's a great responsibility, the not having any regular nurse.'

'Hush, hush!' interposed the old lady loftily; 'that is not your affair. We must obey our betters in this world without questioning. The doctor said that, under the circumstances, it was best that his patient should have no strange faces about her; though, no doubt, that gives us more work to do. Take a good hour to your dinner, my girl; and if you think a little fresh air will do you good, you may try a turn afterwards upon the terrace.'

Mrs Merthyr was a good woman after her fashion, though, if you had deprived her of the externals of dignity, she would not have stood up so well by herself as her stiff silk. In this respect, she was no weaker than many persons in much more eminent situations; and she had a kind heart. Not a whisper of impatience escaped her, as she kept watch in the sick-room, notwithstanding that the interpretation Carry gave to her 'good hour' was excessively liberal. Now she would stalk up to the bed and bestow a pitying glance upon Mabel and the child, and now she would stand by the fire, and muse—no doubt on the future that was awaiting her at Wapshot. Would the young master retain her in her situation, or would his conduct and 'goings on' be such under that roof that she could not with propriety remain there? Mr Horn was no favourite of hers, but he was now her master, and she was one of those persons whose allegiance is very heritable: she would have believed, had she ever chanced to hear of it, in the doctrine of the right divine of kings; and though she would certainly not have abetted a Winthrop in any wrong, it would have been difficult to persuade her to act antagonistically to one of that race. As Mabel watched her through half-shut eyes, she could not help reflecting it was well for her scheme of safety that it did not rest with this respectable dame to put it into effect.

When the waiting-maid returned, it was easy to see in her bright face that it had lately looked upon her lover. But had she persuaded him to do her mistress's bidding? With feverish anxiety, poor Mabel had to wait for this fateful 'yes' or 'no' till Mrs Merthyr had indulged in a diatribe against dawdling: 'When I was your age, girl, I could have had my dinner, and run to the village and

back, in half the time you have thought proper to take;' &c.

At last, having delivered her broadside, this stately three-decker sailed out of the room.

Then 'Philip will be at Fellfoot at eleven, madam,' were Carry's assuring words.

'But the post-chaise—the carriage?' asked Mabel eagerly.

'Oh, of course he will bring the carriage,' answered Carry (as though wheels had been an ordinary supplement of the wings of Love). 'But, O madam, the cold will be something terrible!'

'Does it snow?' inquired her mistress, with apprehension.

'No, madam.'

'Thank Heaven for that!—there will be at least no wheel-tracks to shew the road that we have taken.'

If Carry had contemplated any further remonstrance, the resolute determination expressed in Mabel's tone repressed it. For the rest of the day she busied herself in selecting the warmest clothes and 'wraps' from her mistress's wardrobe; and when the doctor and Mrs Merthyr had paid their last visit for the night, she proceeded to attire her two charges—the one, though so indomitable of spirit, almost as helpless as the other—for their perilous journey. Mabel, in her furs and wool, might have been mistaken for an arctic voyager, but for the pale, transparent face that looked forth as anxiously from its warm hood as any bird, whose young are threatened, peers from its mossy nest. Her babe, swathed like an infant Esquimaux, lay in her arms; she would not part with him even to her faithful maid, nor did Carry press her to do so, since the child was less likely to be unquiet with its mother, and silence was essential for their safety. Imagine them moving ghost-like through the long gallery, the maid leading the way, with one hand shading the candle, and ever and anon stopping to listen to some suspicious sound; Yorkist and Lancastrian, Cavalier and Roundhead, gazing in wonder from their canvas at this mysterious flitting of the last born of their line. On her part, too, Mabel could not forbear a glance at the picture of her predecessor, smiling so gaily on the escape of the rival of her son, as though she saw it would preserve him from a greater crime than any he had yet committed; at which idea Horn Winthrop's menacing face came into Mabel's mind, and froze the very marrow in her bones for all her furs. How the back-stairs creaked beneath their weight as they stole down them! and how the wind in the crannies, as they neared the outer door, strove to rouse the household with its treacherous whispers of alarm! They were already in the stone passage called the Servants' Corridor, when suddenly a light appeared at the other end of it. 'Back, back,' whispered Carry, and her mistress shrunk at once under the shadow of the stairs. 'We are lost: it is Mr Murk!'

'Ah, I see you, Miss Caroline!' cried this gentleman, in thick and yet triumphant tones, as though it was not so easy to recognise one's acquaintances as sober people imagine. 'You keep late hours for this respectable establishment. How for—for?'—Here he abandoned the proposed expression as unsuitable. 'How lucky it happens that I chance to be late too.' Mr Murk was a short squat man, though very strongly built; and in his present condition, which was one of extreme intoxication,

he resembled one of those Dutch tumblers which sway from side to side, and are the delight of children. His egotism caused him to imagine that he was the delight of the waiting-maid.

'May I hope that this meeting is not altogether an accident, Miss Caroline?' hiccuped this belowstairs Silenus with a leer, his head turned admiringly aside, and his candle sloped to that degree that the grease dropped on the floor. He stretched out his disengaged arm to welcome the object of affection thus suddenly presented to him, and effectually barred the way. A guttural noise, indicative of ardent passion, a parody on the purr of a pleased cat, issued from his thick lips.

'I am a deal better man than Philip,' murmured he assuringly; 'and your master's own man.'

As for this first position, it might have been open to doubt, but the second was indisputable. He looked Mr Horn's own man every inch of him.

'You'll give me a kiss; I know you will,' pleaded he. An irresistible glance from his ferret eyes accompanied this request, and yet the maiden hesitated.

'You must catch me first, Mr Murk,' cried she, with a light laugh, and stepped aside into the housekeeper's parlour, the door of which stood ajar.

A look of ineffable complacency stole over Mr Murk's features. He did not trouble himself to pursue his Daphne with the speed of an Apollo, but remained a moment in the corridor to confess a weakness. 'And I had almost begun to believe,' said he, with a wag of his head, 'that this kind little wench was a modest girl!' The delay was fatal to his expectations. The housekeeper's parlour had two doors. He found it empty, and the inner door locked; and when he returned to that which opened into the corridor, a click of the key informed him that he was a prisoner.

'My beautiful Carry,' cried he through the key-hole, 'a joke is a joke, but you break my heart.'

'Will you put your candle out?' replied the dulcet voice of Thisbe.

'I have done it,' cried Pyramus, suiting the action to the word.

'Then, now, I'll leave you, you drunken pig, since there is no fear of your setting the house on fire.'

The next moment, he heard the back door open, and felt the rush of the cold night-air; and that was all that Mr Murk—who had been left at home expressly to look after them—had to communicate to his master in the way of information concerning the escape of Mrs Winthrop and her babe from Wapshot Hall.

CHAPTER XL.—A RIFT IN THE CLOUDS.

It is near three years since Mabel and her babe, with Carry, fled from Wapshot Hall in that winter's night, and left no footsteps behind them. Her secret and sudden flight was a wonder to the country round—not of nine days, but of ninety. In the feudal districts, editors are fortunately rare, and less 'enterprising' than in the towns, or it would certainly have got into the newspapers; as it was, it formed the staple of conversation in country houses, and was a boon to every dinner-table. A great many persons claimed to possess exclusive information upon the matter, but their accounts were widely different. Of course, none ap-

proached the truth; but those which came nearest to it averred that Mrs Winthrop had left her home to avoid the presence of her step-son, who, happily for this theory, had chanced to arrive the very morning after her departure. His temper was violent, his manners were odious, and his absence from Wapshot, during the brief period of her wedded life, proved that his step-mother and himself were far from being on good terms. She was a young woman of spirit, and had fled to avoid his rudeness, and perhaps to anticipate being turned out of the house. It was allowed that Horn Winthrop was capable of anything.

The explanation of the affair that found most general credence, however, was, that, overwhelmed by the calamity of her husband's sudden death, at a time when she was so ill fitted to bear it, Mabel's mind had given way, and that she had been placed by her friends in a private asylum for the insane. The village doctor who had attended her in her confinement confirmed this view so far as to admit that, since the birth of her child, Mrs Winthrop had 'never been herself'; while Horn, on his part, for reasons of his own, took no pains to contradict this view of the question. That foul play had taken place, never entered into anybody's head; and, indeed, there was Philip Dod, the miller's son, to vouch for the fact that Mrs Winthrop had left the Hall of her own free-will; though beyond that, nothing could be extracted from him by the most skilful brain-sucker. Philip was pump-proof for the best of reasons—he had nothing to tell. When he had occasion to write to his Beloved Object, he addressed her under cover to Miss Martha Barr, at Brackmere. All communications, and they were few enough, intended for Mabel, first passed through her cousin's hands, and were forwarded none knew whither. It was not likely that she should have fled to Brackmere. To trespass a second time, with her child and maid too, upon Martha's slender means of hospitality was, of course, not to be thought of; and as for taking lodgings for herself in the little town, if its gossip had been odious to her of old, how could she have endured it *now*? Above all, it was her chief solicitude to keep the place of her retreat a secret from Horn Winthrop, and Brackmere was the very spot to which his fierce eyes would turn for her; and did turn.

Smarting from his recent discomfiture at the fair hands of Carry, as well as from the savage displeasure of his baffled master, Mr Murk had been despatched in hot haste to Brackmere, and awakened once more the admiration of that rising watering-place as a visitor out of the season. He avoided *The George*, however, putting up at a much less ambitious house of entertainment, and maintained as discreet an incognito as his native frankness (when in his cups) permitted. He had hung about Bellevue Terrace, and cast sheep's-eyes upon Miss Barr's abigail—not without results. The excellent Rachel, indeed, was no longer there; she was 'not dead,' but 'gone before' his arrival; let us hope, to a better place. She had not been able satisfactorily to explain her right to certain properties abstracted from Miss Jennings' jewel-drawer during her short residence with that lady, and traced, through the medium of a pawnbroker, to her own possession. When Mr Simcoe, who (at Martha's request) had undertaken to conduct a private inquiry into the

matter in person, took occasion to cross-examine her, it unfortunately happened that this good woman was in liquor, and would vouchsafe nothing in the way of information, except a monotonous chant, the burden of which was, that she asked his pardon, but knew her place, and hoped the cat would spit in his face. Untouched by the simplicity of this ballad, Mr Simcoe would have summoned a policeman, but for Martha's urgent supplication. 'Only upon one condition, my dear madam,' said he, 'shall I forbear to do so—you must get rid of this drunken thief within the hour.' Which was accordingly done, though her departure almost broke her mistress's heart.

Her successor had two eyes which reciprocated Mr Murk's soft glances. As a gentleman supporting himself on his own means at a hotel, it was only natural that his honourable addresses should be welcome to her. But when he came to put the all-important question: 'Jemima-Jane, my own dear love, to what address does your missis write to her cousin?' she was unable to gratify his curiosity. Though her education had not been utterly neglected, she could only read 'print'; a running hand was as undecipherable to her as ancient Cornish (now only known to choughs). As for letting dear Mr Murk glance his eye over an envelope, it had, unfortunately, become her mistress's invariable custom to pocket her letters as soon as she had addressed them, and to post them herself.

The retreat that Mabel had chosen was not, indeed, likely to be discovered, so far as faithful Martha Barr was concerned. She could not understand the reasons which made her cousin so solicitous to live retired. To her sturdy common-sense, the terror in which the young widow stood of her step-son seemed, perhaps, ridiculous and chimerical; but she had no doubt of its genuineness. Mabel had appealed to her on behalf of her helpless babe, to maintain the secret of her hiding-place inviolate, and henceforth the trust was sacred to her. She desired greatly to consult the astute Mr Simcoe, and to demand from him that assistance and protection which she well knew he would be eager to afford; but she held her peace. She yearned to clasp Mabel to her own bosom, and to behold the child whom the young mother described with such ecstatic fondness; but she made no attempt to do so, lest, as Mabel warned her would be the case, she should be watched and followed. That Horn Winthrop was, for some cause or other, exceedingly desirous to ascertain where his step-mother resided, was clear to Martha; not only had she discovered, though not till some time after the fact, Mr Murk's attempt to acquire the address, but she had seen Horn, with her own eyes, at Brackmere, a place which, Simcoite though she was at heart, she did not believe was likely to have had any native attraction for him. He had made no attempt to intrude upon her, and after a while had left the place; but she never felt safe from his machinations. Not long ago, indeed, as though despairing of gaining his end by craft, he had despatched an emissary to ask the question: 'Where is Mr Winthrop's widow now residing?' point-blank. A handsome, frank young fellow, very fitted in appearance to win confidence, and who seemed thoroughly ashamed of the part he had been commissioned to play, had called upon her in person, but declined to give his name.

'It is my cousin's wish to live privately,' she had replied, with great indignation; 'and if it were otherwise, what right have you, may I ask, to make any such inquiry?'

At this he stammered, coloured, looked exceedingly disconcerted, and left the house, as the triumphant Martha vigorously expressed it, 'with his tail between his legs, and a flea in his ear.'

Though thus mysteriously debarred from Mabel's society, she heard from her very regularly, and was almost as well acquainted with her occupation and mode of life as though she had shared them. Upon one occasion she had even received a photograph, with 'Burn this at once' upon it, of the residence her cousin had chosen. In a break of a line of high chalk cliffs, was a small wooded chine, through which a stream ran down, and was lost in the yellow sands. Across the stream was a wooden bridge, and beside the bridge a cottage, at whose door stood a fair lady with a child in her arms. These two figures Martha had cut out, before committing the rest of the picture to the flames, and they formed the joy of her life. Thanks to the blessed sun, under which, it is said, nothing is new, and yet that has done such new and good things for the absent and the surviving in these latter days, she had thus both Mabel and her Georgy; and whenever tidings came from the former, these portraits were produced, to illustrate, as it were, the letter-press.

Mabel had not many striking incidents to describe, as may be well imagined; and, to say truth, her letters might have been termed the Annals of Master Georgy. In them were chronicled with minuteness such events as the cutting of his teeth, and even of his hair (a lock of which was enclosed to his unknown 'Marty'); his favourable rashes; his wicked (and delightful) escapades; his latest acquisitions of vocabulary. When he had the measles, there were almost daily bulletins. 'A most excellent doctor fortunately resides in the village, else Heaven only knows what we should have done. Very like our own dear old Dr Bowen at Swallowdip. He is the only person I can speak to hereabouts, except my landlady; but my sweet Georgy has his own circle of acquaintance—his chief friend is the old fisherman who is so good as to supply us with lobsters. You will laugh at this; but they are our sole luxury, and Carry and I prize them exceedingly. Carry is most kind, and is devoted to the child. My heart smites me for so selfishly debarring her from the company of her lover; but she is content, for my sake, to wait a little longer yet, and the risk of it would be so terrible. When Georgy gets a few months older, we shall be better able to dispense with her services. . . . I think of you, dear Martha, a hundred times a day! How I wish you could be our companion in our walks along the cliff-path (at this you look alarmed, but never fear; you may be sure that Master G. is always carried), and on these beautiful sands! But why do I vex myself (and as I flatter myself, you also) with such thoughts! Alas! the sight of you would fill me with only too well-founded fears. I do not know even whether the day will ever arrive when I may tell you *what* fears. In the meantime, be assured, my dear cousin, that, but for them, and for our enforced separation, I should now be happy. My boy is all in all to me. . . . You used to admire my poor husband, I know; well, Georgy is a very handsome

likeness of his father, and so loving and tender-hearted! Oh, if you could but see him! . . .'

Mabel's letters were all of this homely type, and would have portrayed a life of wholesome sunshine, but for the shadow of one morbid fear.

At last came a communication of a very different sort: no linked home news long drawn out, but a few rapid lines, that breathed expectancy and hoped-for action; above all, in the greatness of its tidings, the apprehension that hovered over all her sky seemed almost to be scared away. 'A miracle has happened, Martha, dearest, or a something that seems a miracle! I may not now tell you what it is, for the same reason that I have so long kept silence; but I have good hope that, at no distant date, I may tell you *all*, and that by word of mouth. In the meantime, send me the address of some honest lawyer—a man to whom one can trust a secret of the last importance. Mr Simcoe will help you so far, I am well convinced, for the sake of old times. I scarcely know what I write. Conceive that it has become possible that the man we fear may have good cause to disquiet us no longer—that the way of life that looked so rough may be smoothed for my tender boy, and you will make allowance for anything I may write. Do not, at all events, doubt my sanity. Let me have your reply by return of post. I shall not sleep till I have got it—till I have seen this lawyer. He must be told nothing at present. Mr Simcoe will make an appointment for me with him at the earliest date; but he must not, of course, mention my name. I am still cautious, you see, although in such a transport. For years, dear Martha, I have known nothing but Fear; and now that Hope has come, I scarce know how to entertain him.'

Martha Barr endeavoured to commit this letter to memory, but failing in that feat, and having burned the envelope, and cut off the address, she took it straight to Maison Tiddliwinks, and placed it in Mr Simcoe's own hands.

'The poor young lady must be mad,' said that gentleman, when he had read it.

'No, no,' said Martha: 'something has greatly excited her, that is all.'

'Excited her! When a woman writes to say: "I want to see an honest lawyer," I say she must be mad, ma'am. There is, in my opinion, no such anomaly in existence. I should just as soon go down to the sea-shore yonder with the expectation of catching a dry fish. There are clever lawyers, no doubt—too clever by half—and there is a still larger assortment of stupid ones; but as for their honesty—I have had a good deal to do with the law in the way of house-property, and I really cannot lend myself, madam, to any such gross deception as you propose.'

'But if you don't know of one personally, Mr Simcoe,' argued Martha, 'you must surely have heard several highly spoken of?'

'Only when I have heard them speak of themselves,' was the resolute reply. The fact was that, during his earlier building speculations, Mr Simcoe had been very sorely bitten by an attorney, and the wound had never healed. All that Martha could get out of him was the mitigated approval of one Mr Oakleigh, a City solicitor whom Mr Simcoe had of late employed in connection with St Etheldreda's.

'I have never seen the man in my life,' said he,

'which is perhaps so far fortunate for him; but he did not cheat me in the only transaction I have yet had with him; and, what is an undeniable recommendation, he has been but few years at his trade.'

So with Mr Oakleigh the appointment was made.

THE MONTH:

SCIENCE AND ARTS.

In a paper read at the Royal Society, Mr Francis Galton gave an account of experiments he had made to test Mr Darwin's theory of pangenesis—a theory put forward to explain the numerous phenomena allied to simple reproduction, such as reversion, growth, and repair of injuries. The principal points of this theory are, that each one of the myriad cells in every living body is, to a great extent, an independent organism, and that this organism throws 'gemmules' into the circulation, where they swarm, waiting opportunity for further development. If this be true, the differences among animals of the same species are due to differences of blood; and if the blood of one variety be transfused into the veins of another, signs of mongrelism should in due time appear in the offspring of the one that had received the alien blood. Mr Galton experimented on rabbits, choosing the *silver-gray*, a pure variety; and into their veins he transfused the blood of other varieties; and though he worked at his self-imposed task with patience and skill for more than a year, he arrived at no result favourable to the Darwinian theory. About six score young rabbits were produced, and not one shewed signs of departure from the *silver-gray*. Cross circulation, as well as transfusion, was tried; but the *silver-gray* still remained a pure *silver-gray*. Hereupon, Mr Galton says: 'The conclusion from this large series of experiments is not to be avoided, namely, that the doctrine of pangenesis, pure and simple, is incorrect.'

Dr Emerson Reynolds of Dublin has made known a method of obtaining a colloid body by uniting acetone with mercuric oxide. The particulars of the method are published in the *Proceedings of the Royal Society*; but we mention here that the 'colloid body' is a transparent jelly, firm and permanent in character, which may prove of great use to naturalists and collectors of specimens generally. A quantity kept eight months shewed no signs of change; and we are informed that zoological specimens, if carefully cleansed before enclosure in the jelly, will keep well. The transparency of the jelly would favour the preservation of delicate articles of bone or metal within the same gelatinous envelope.

A signal-light that sets itself on fire, and cannot be put out, but burns itself out, ought to be a very useful article, especially on railways and in ships. Such a light has been invented by Mr N. J. Holmes, whose name has long been known in connection with telegraphs; and it has the advantage of being compact, portable, and ready for use at a minute's notice. Roughly described, the tin case or lamp which contains the inflammable material is about the size of a pint bottle, fitted into a

wooden 'float,' in which it swims neck downwards. The neck is stopped by a plug, which can be easily pierced; while, from the end that floats above the water, a small cone projects upwards. When a signal is wanted, the point of the cone is knocked off, a hole is pierced through the plug above mentioned, and the lamp, fixed in the float, is flung overboard. No sooner does the water reach the interior than the contents blaze up through the cone with a most brilliant flame, sixteen inches high, for five minutes; during the next ten minutes the flame is about a foot in height; after which, for about forty minutes, it shews a small bright flame, which continues until all the fuel within the lamp is completely burned. This fuel consists of a mixture of chalk and phosphorus, which, as is well known, is highly inflammable; yet it is not dangerous, neither does it throw out heat while burning. In cases where it would be required to shew a light from the yard-arm or mast-head, a special form of bucket is constructed, in which the lower end of the lamp dips into water, and thereby excites the flame; and this same apparatus can be used on railways, or in any place where a bright signal-light, visible at a great distance, is required on land.

Lieutenant Abney, of the Royal Engineers, has invented an instrument which can be used as a level and as a clinometer (that is, angle-measurer). It can be conveniently carried in a breast-pocket, and so is always available for the determination of angles of depression and elevation, and the slopes of hills at a distance. The advantage of this in a surveying expedition, in a military reconnaissance, or to travellers in the Alps, will be obvious. The instrument rendered good service during the Abyssinian expedition, and has been adopted for use in the army. It is manufactured by Messrs Elliott Brothers, of the Strand, London.

An improvement in the construction of the Archimedeal screw for raising water has been made by Mr W. Airy, C.E. It consists in so fitting the threads of the screw that, according to the spiral on which they are placed, they assume the proper curve, and are consequently more efficient for the delivery of water. The quicker the spiral, the flatter must be the angle at which the screw is laid when in work. And it is found in practice, that a quick spiral laid at the best angle will raise more water than any other. The Archimedeal screw is largely employed in the Netherlands, and may be used with advantage in many situations where water is required to be raised from a low to a higher level.

It is known to electricians that the resistance of a conductor is increased by elevation of its temperature. Mr C. W. Siemens, F.R.S., takes advantage of this fact to construct a pyrometer by which to measure the temperature of a furnace. The pyrometer (heat-measurer), in this instance, is a small cylinder of platinum, to which long wires are attached. The cylinder is placed in the middle of a furnace, where it becomes of the same temperature as all that surrounds it; and the amount of this temperature is recorded by a voltmeter outside the furnace, to which the wires are fastened. The length of wire is unimportant; so that a manufacturer may, if he pleases, have in his office indications of the heat of a furnace at a distance of a mile or more. A really trustworthy pyrometer has long been wanted, for the Wedgewood py-

rometer, commonly in use, is not to be depended on. Its indications are at times erroneous to thousands of degrees. We venture to suggest that Mr Siemens' pyrometer, or a modification of it, might be used to give indications of approach of spontaneous combustion among the cargo in the hold of a ship, in wool warehouses, the interior of haystacks, and other places liable to the risk of self-generated fire.

A German physicist, Mr Fritz, after long investigation of the subject, concludes that the connection between sun-spots and auroral and magnetic disturbances indicates some cause or action external to the sun; and this he finds in the positions, or, as astronomers say, the 'configurations' of the planets. The planetary influence he places in the following order: Jupiter, Venus, Mercury, Earth, Saturn; but their magnetism, as well as their position, has something to do with the phenomena of sun-spots. As a rule, there will be most spots when Jupiter and Saturn are in quadrature, and fewest when those planets are in conjunction. As regards the auroras, Mr Fritz is of opinion that there is a monthly maximum occurring every twenty-seven and a quarter days, and that this is dependent on the presence of a planet between Mercury and the sun, which has not yet been discovered.

It is a truism to state that much ingenuity has been expended in endeavours to popularise art, but it is a fact of constant recurrence. One of the latest is in lithography, called the 'new autographic process;' and this process is at once simple, direct, and effective. A drawing is made on granulated paper with lithographic chalk, the artist being at liberty to 'scrape out lights' at pleasure. The drawing is then transferred to a lithographic stone, from which prints can be taken in the ordinary way, and in any number. These prints are perfect reproductions of the original, with the artist's touches, exactly as the drawing left his hands. In this way, the works of all artists, from the highest to the lowest, can be reproduced and sold at a very moderate cost. A collection recently exhibited by Maclure and Company of Walbrook, London, Lithographers to the Queen, comprised drawings by members of the Royal Academy, and of other distinguished artists on both sides of the Tweed, which were admirable examples of many different styles; landscapes, buildings, portraits, and groups being equally well produced. Among them, a forest-piece, by Lord Hardinge, shewed at once the mastery of the artist, and the perfect adaptability of the process to the reproduction of natural objects; and in this way we venture to believe that a taste for true art may be widely diffused.

The experiments made in the United States, with a view to discover the best way of transmitting power by means of leather belts, have led to the conclusion, that the effectual way to prevent the slipping of the belts is to cover the pulleys with leather. From this, it would appear that leather on leather offers a certain steadiness, and with the further advantage that the belt does not fly off, and wears out less rapidly than when it runs on iron or wood. It is found in practice in a spinning-factory, that a belt running on leather will produce a thread free from knots, and of much greater length, within a given time, than when running (and slipping) on an iron pulley. And

we learn that in a steam-mill with five run of mill-stones, each set ground twenty-seven bushels a day after the pulleys were covered with leather, being from three to four bushels more each day than before. In paper-mills and sugar-mills, equally satisfactory results have been obtained; and we may conclude that pulleys covered with leather are best under all circumstances, even where belts or ropes of wire are used.

The recently published Report by the Council of the Scottish Meteorological Society shews that the study of meteorology is making good progress. The Society have eighty-five observing stations in Scotland, and others in foreign parts, and are thereby enabled to form conclusions as to coming weather. But experience has demonstrated that elevated stations give earlier indications of change of temperature than low ones, and though three of the Society's stations are more than a thousand feet above the sea, they are not high enough for the exigencies of modern science, and the Report implies that 'the best position for a station, for the sake of getting not only early but true indications of atmospheric changes, would undoubtedly be at the very top of Ben Lomond or Ben Nevis.' There is no doubt that British meteorology would gain largely thereby, for at present we are dependent on a station in the Dovrefjeld in Norway for early intimations of changes of weather, some of which involve heavy and destructive gales. The importance of this question is recognised in the United States, where, under superintendence of the Smithsonian Institution at Washington, a station is to be established on the Rocky Mountains, about 8500 feet above the sea. The benefit to be anticipated from this station can hardly fail to be great, when, to quote the words of the Report, 'it is remembered that most of the storms which originate in the West Indies take a northerly direction, and sweep over the eastern half of America lying between the Rocky Mountains and the Atlantic, so that an intelligent observer at the proposed station will in many cases be able to give warning of storms to northern seaports—warnings probably not without use even to this country, which is often visited by storms generated in America.'

Students of ancient art are talking about the recent explorations of the Ribblesdale caves, near the boundary of Westmoreland and Yorkshire. Brooches, armlets, and other ornaments have there been found, which, as is believed, denote occupation of the caves by the Romano-Celtic population between the fifth and seventh centuries; a period when they were harassed by marauders from the north. These articles are brought to light by digging up the floor; but on excavating deeper, relics of art still more ancient are met with in the form of flint implements, bone harpoons, mingled with remains of the deer and bear. These, in all probability, are of a period long preceding the Roman occupation.

We mentioned last year that Major Sladen had travelled from Bhamo in Burmah to the Shan States, crossing on the way the Kachyan Hills. The inhabitants of these hills are commonly described as barbarous. But specimens of their manufactures of silk, woollen, and cotton, their domestic utensils, musical instruments, and ornaments, which have been exhibited at scientific gatherings in London, exemplify a considerable amount of civilisation among those hardy hill-tribes. Indeed, one of the explorers who has recently visited Argyle-

shire states that the civilisation in the remote hilly districts of that county is not more advanced than among the Kachyans.

IN THE MONTH OF MAY.

Is the month of May, when the chestnuts bloom,
And the white cones rise in the clear blue sky,
Oh, then I think of the dear old home
That stands far off—in the years gone by!
O my home! my old dear home!
That I never more shall see,
The breath of the spring, through lilac boughs,
Brings sad, sweet dreams to me.

The grass is as green as grass can be,
And sprinkled all over the daisies blow;
By the iron gate is the chestnut tree,
And the walls gleam white in the summer glow.
O my home! my glad home!
Is the sunshine round you still?
Are you standing yet, so white, so green,
On the road beneath the hill?

But I never see you by moonlight pale,
Or on misty evenings when clouds rain low,
Or strewn with red leaves by the autumn gale,
Or looming dark through the falling snow.
O my home! my bright old home!
My home that was always bright,
Your picture is bound in a golden frame
With Childhood, and Morning, and Light.

And could I fly, like the bird of spring,
Over town and mountain, and over the sea,
I would not rest my wandering wing
By the gleaming walls—on the chestnut tree.
O my home! my merry old home!
That was once so glad, so gay;
It has lost the light of the eyes I loved,
And the voices are hushed for aye.

In another home—in another land,
Where God is the sun, and there comes no night—
Is gathering up the beloved band
That filled the old house with love and light.
O sweet home! O distant home!
O home where I hope to be!
Shall I stand some day at your gate, and hold
Dear hands stretched out to me?

Meanwhile, in the blossomy month of May,
Green month of white blossoms, too sweet to last,
I think of the home, where, like one bright day,
The enchanted summers of childhood passed.
Old home of the dawn and the dew!
That I turn from the sunset to see,
Were it not for the hope of the home above,
Could I bear to remember thee!

The Publishers of CHAMBERS'S JOURNAL beg to direct the attention of CONTRIBUTORS to the following notice:

- 1st. All communications should be addressed to the Editor, 47 Paternoster Row, London.
 - 2d. To insure the return of papers that may prove ineligible, postage-stamps should in every case accompany them.
 - 3d. All MSS. should bear the author's full CHRISTIAN name, surname, and address, legibly written.
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